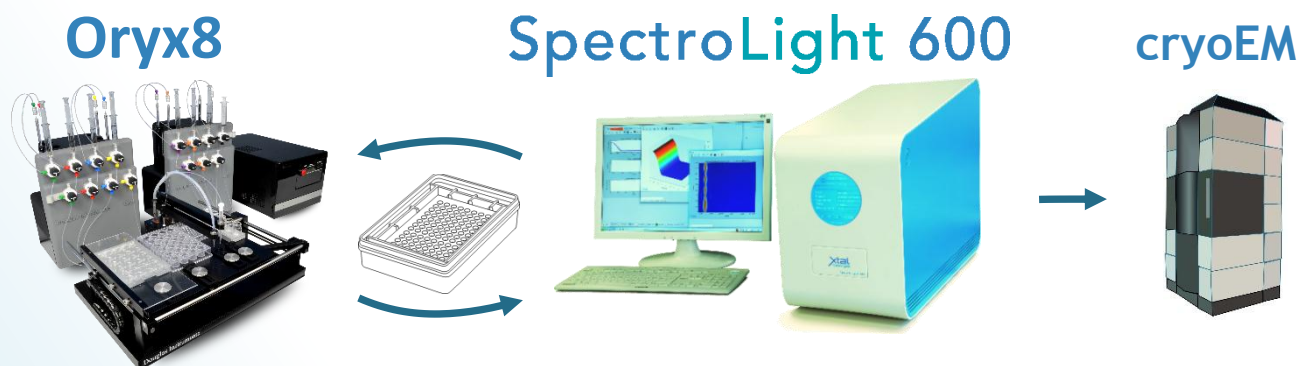


Explore chemical space for **cryoEM** and crystallization



The Oryx8 in combination with the SpectroLight 600 can identify promising conditions for structure determination by cryoEM (and crystallization).

For cryoEM, screens comprising of detergents, ions from the extremes of the Hofmeister series, buffers and substrates can be used. Favorable conditions can then be optimized before setting up cryoEM grids.

Oryx8

Multi-channel nanoliter dispensing system

- Microbatch-under-oil is suitable for crystallization and cryoEM
- Only 7.0 μl of protein required for a 96-well experiment
- Hanging and sitting-drop vapor diffusion
- Auto design and gradient optimization with up to 7 ingredients

Oryx8 screening under-oil



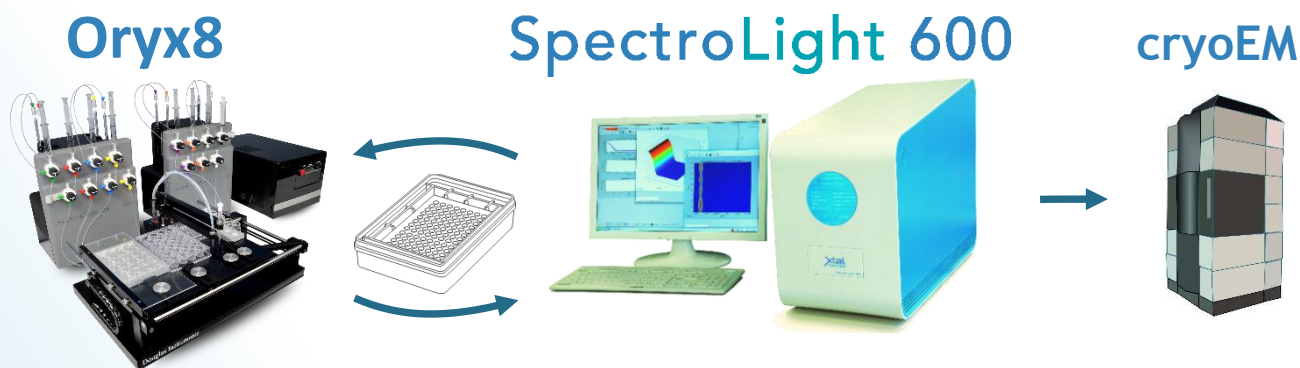
Oryx8 optimization software

Microbatch-Under-Oil Optimization			
View		Microbatch-Under-Oil Opt	
<input checked="" type="radio"/> Concentration Show Units <input type="checkbox"/> <input type="radio"/> Volume <input type="radio"/> Volume % <input type="radio"/> Proportion <input type="radio"/> Steps			
12	10.00 mg/ml Protein 4.00 M K thiocyanate Nett Solution pH Total Buffer Concentration	12A 5.000 0.100 7.00 0.00	12B 6.000 0.100 7.00 0.00
11	10.00 mg/ml Protein 4.00 M K thiocyanate Nett Solution pH Total Buffer Concentration	11A 5.000 0.200 7.00 0.00	11B 6.000 0.200 7.00 0.00
10	10.00 mg/ml Protein 4.00 M K thiocyanate Nett Solution pH Total Buffer Concentration	10A 5.000 0.300 7.00 0.00	10B 6.000 0.300 7.00 0.00

In situ under-oil DLS measurement



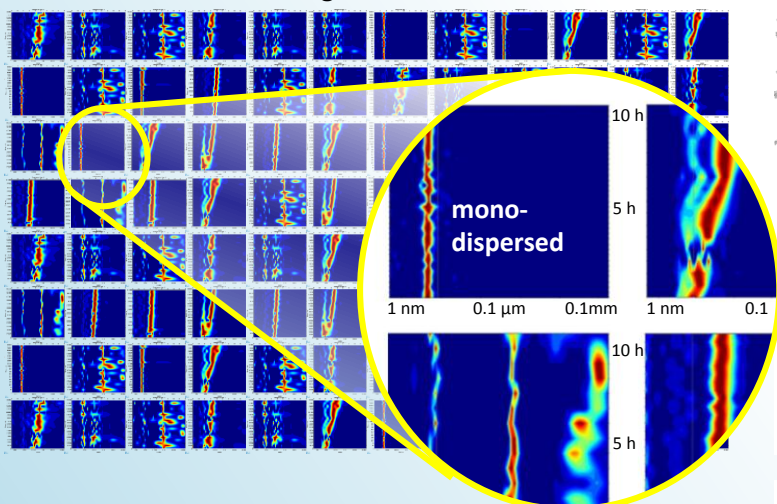
Explore chemical space for cryoEM and crystallization



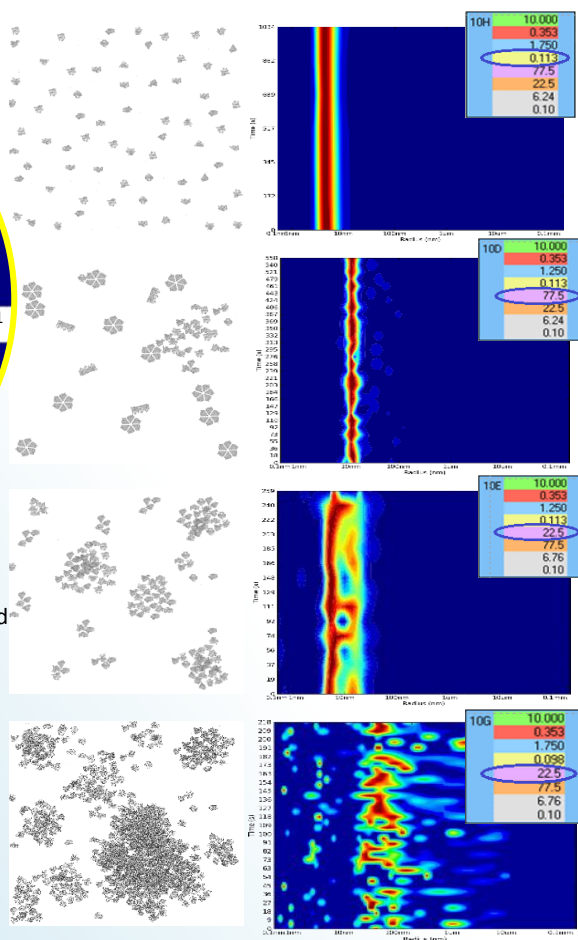
Screening and optimization experiments (with cryoEM and/or crystallography in mind) can be dispensed by the Oryx8, then efficiently analyzed by the SpectroLight 600.

Several hundred samples can be analyzed per day, before choosing the best to pass on for analysis by cryoEM.

Representative results for a membrane protein in a 96 well detergent screen:



Interpretation



SpectroLight 600: In-Plate Dynamic Light Scattering System to Analyze, Monitor and Image Sub μl Droplets

- Size distribution determination non invasively by *in-situ* DLS fully automated imaging system
- Operates on standard plates to perform high throughput in sub-microliter volumes
- Characterization of biomolecules for further sample evaluation like NMR, CryoEM, SAXS or Crystallization
- Assess homogeneity aggregation and assembly state
- Optimize buffer conditions, e.g. by selection of a specific detergent for membrane proteins solubility
- Investigate protein interactions, e.g. oligomerization, aggregation, denaturation, receptor-ligand interactions
- No cleaning required